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Amendments to the Written Description of the Specification

Applicant presents replacement paragraphs below indicating the changes with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

On page 1, after the title insert: --Background Of The Invention--;

On page 1, after "Background of the Invention" but before the first paragraph insert --Field of the Invention--;

On page 1, before the second paragraph beginning on line 4, insert --Discussion of the Related Art--;

Please amend the third and fourth paragraphs beginning on page 1, lines 10-29 as shown below:

To check the proper operation of the microprocessor, a monitoring circuit 18 (TEST) is generally integrated ~~to~~ with integrated circuit 10. Monitoring circuit 18 is capable of reading specific data provided by microprocessor 12 on execution of a program, and of possibly processing the read data. Test terminals 22 connect monitoring circuit 18 to an analysis tool 24. Analysis tool 24 may process the received signals, for example, according to commands provided by a user, and ensure a detailed analysis of the operation of microprocessor 12. In particular, analysis tool 24 may determine the program instruction sequence really executed by microprocessor 12.

The number of test terminals 22 may be on the same order of magnitude as the number of input/output terminals 16, for example, from 200 to 400 terminals. Test terminals 22 as well as the connections of monitoring circuit 18 take up a significant silicon surface area, which causes an unwanted increase in the circuit cost. For this purpose, a first version of integrated circuit 10 comprising monitoring circuit 18 and test terminals 22 is produced in small quantities to debug the program of microprocessor 12 or "user program". After this debugging, a version of integrated circuit 10 rid of monitoring circuit 18 and of test terminals 22 is sold. This ~~implies~~ requires the forming of two versions of the integrated circuit, which requires a significant

amount of work and is relatively expensive. Further, the final chip is not necessarily identical to the tested chip.

Please amend the second and third paragraphs on page 2 as shown below:

Thus, standard IEEE-ISTO-5001, in preparation, provides in its 1999 version, accessible, for example, on website www.ieee-isto.org/Nexus5001, a specific message exchange protocol between a monitoring circuit and an analysis tool for a monitoring circuit 18 requiring but a reduced number of test terminals 22.

Among the messages provided by monitoring circuit 18 according to standard IEEE-ISTO-5001, program tracing messages and data messages are distinguished. Program tracing messages provide information relative to the order of execution of the program by microprocessor 12. It may, for example, be a message indicating that a jump has occurred in the program executed by microprocessor 12. Data messages correspond to the other messages provided by monitoring circuit 18 and especially provide information relative the data processed by the microprocessor. It may be a message representative of a data read or write operation in an area of memory 14.

Please amend the paragraph beginning on page 2, line 30 through page 3, line 25 as shown below:

When monitoring circuit 18 transmits to analysis tool 24 the program tracing and data messages altogether, analysis tool 24 generally can assign to each received message a specific instruction of the program by means of adapted algorithms. However, to avoid for the data transmission frequency of monitoring circuit 18 to exceed the passband imposed by the technologies used to form the intermediary elements between monitoring circuit 18 and test terminals 22, that is, to avoid saturation of monitoring circuit 18, only some of the messages provided by standard IEEE-ISTO-5001 are generally transmitted on a same program portion. For example, only the read operations concerning a specific area of memory 14 may be subject to the message transmission to analysis tool 24. In such an example, when analysis tool 24 successively receives several data messages between two program tracing messages, it may be difficult to have a specific program instruction correspond to each received data message if, between the

two program instructions corresponding to the two program tracing messages, there exist a significant number of instructions from which the received data messages can originate. The establishing of correspondences is more difficult still, or even impossible in certain cases, for example when an indirect addressing mode is used. An example of use of an indirect addressing mode corresponds to an operation of reading or writing of data associated with a program instruction which does not explicitly comprise the address of a register of the memory into or from which the data must be written or read, but which comprises the address of a register in which is stored the address of the memory register into or from which the data must be written or read. In the case where several program instructions associated with a read or write operation are neighbors and refer to ~~a~~ the same register, it can then be difficult, or even impossible, to establish the correspondence between the received messages and the corresponding instructions.

On page 4, before the line 16, insert --Summary of the Invention--;

Please amend the paragraph beginning on page 4, line 23 through page 5, line 2, as shown below:

To achieve these and other objects, the present invention provides a method for transmitting digital messages through output terminals of a monitoring circuit integrated ~~to~~ on a microprocessor, said messages being representative of determined events occurring on execution of instructions by the microprocessor, comprising the step of, after or before transmission of at least one specific message associated with a specific event, transmitting a correlation message comprising an identifier of said specific message and a counter of the number of instructions executed by the microprocessor between the instruction associated with the transmission of said specific message and the instruction associated with the transmission of a selected previous message.

On page 5, before line 28, insert --Brief Description of the Drawings--;

On page 6, before line 5, insert --Detailed Description--;

Please amend the two paragraphs beginning on page 6, line 18 through page 7, line 11 as shown below:

A second field SRC of the correlation message comprises a variable number of bits and indicates whether monitoring circuit 18 simultaneously exchanges data with several microprocessors or whether monitoring circuit 18 exchanges data with ~~a~~ the same microprocessor simultaneously executing several different programs. The second field contains no bit in the case where monitoring circuit 18 is connected to a single microprocessor 12 which executes a single program.

A third field EVENT of the correlation message comprises a variable number of bits and is equal to an identifier of the data message associated with the correlation message. According to the number of possible types of data messages that can be associated with a correlation message, the size of field EVENT is smaller or larger. The most frequent data messages for example correspond to a message representative of a read or write instruction, to a message indicating that certain operation conditions of the microprocessor are fulfilled or to a message indicating the occurrence of a specific event which does not necessarily depend on the operation of microprocessor 12. In the last example, the specific event, for example, corresponds to the reception by microprocessor 12 of a signal indicating that the charge level of the batteries supplying chip 10 is below a determined threshold. It may also be, for an application to mobile telephony, the transmission of a signal for controlling the blanking of a portable telephone screen. Further, standard IEEE-ISTO-5001 enables a user to provide personalized messages in addition to the messages explicitly provided by the standard. The personalized messages are then considered as data messages and the transmission of a personalized message is preceded or followed by the transmission of a correlation message.

On page 8, line 21, please insert:

--Such alterations, modifications, and improvements are intended to be part of this disclosure, and are intended to be within the spirit and the scope of the present invention. Accordingly, the foregoing description is by way of example only and is not intended to be limiting. The present invention is limited only as defined in the following claims and the equivalents thereto.